



Chrisal Probiotic ABC's for Back Yard Poultry Growers

*Improve bird health, reduce odors & decrease the risk of infection
by maintaining healthy microbe populations in barns, sheds and bedding*

(B) Clean & Treat Water, Water Lines and/or Drinkers

1) First Clean Water Lines with Heavy Duty Cleaner (HDC)

For first time use, it is good to do a complete Preliminary Cleaning to remove the bulk of existing biofilm build up in water lines and drinkers. *Do not allow animals to drink the water that contains biofilm that is loosened in this step. Flush the lines and drinkers thoroughly with clean water after this first cleaning as HDC is a CLEANER and NOT TO BE USED FOR DRINKING or SPRAYING..*

NOTE: Chrisal will not hurt the animals, but biofilm are bacterial colonies and can be toxic.

2) Preliminary Cleaning of Water Lines/Hoses/Drinkers

Dilute 6 ounces of **HDC** per gallon of warm water and pour into hoses or water lines until the water line system is full. Leave this solution sit in the water lines overnight, then flush well with fresh water. Repeat as necessary to remove All dirt and biofilm Also wash water pails, dishes and all other containers with the diluted solution of HDC and rinse thoroughly.

2. Treat Water Lines with Water Plus (W+)

When watering the animals, dilute the **Water PLUS (or PEC)** with clean water at the following ratios:

- New chicks in first week: One Table Spoon (10 ml) of **W+** into 2 gallons of water
- Weeks 2 and older: Half (to One) Tea spoon (2ml) of **W+** into 2 gallons of water

Notes: 1 ml is the same as 1 cc. And, please Do Not Contaminate the Chrisal Concentrated by letting any Water, dirt or anything get into the Concentrate Jugs (and the shelf life will be years).

And, using more Water PLUS or PEC than minimum recommended in the water is ok, less is not.

If using a water line system where you inject product into the water lines, ask for the commercial Water Plus dilution sheet which gives the stock dilution tables when using a 1: 128 medicator system.

- **Shake the concentrate before diluting** - Probiotic bacteria settle at bottom when undisturbed.
- **Water temperature** – 50°F (10°C) to 120°F (50°C) maximum. Cool water is OK. Do not freeze.
- **Monitoring pH:** The pH of the water should be kept in a range of pH 5.0 to pH 9.0; excessive acidity or alkalinity can hinder the action of the Chrisal probiotics and not good for chickens.
- **Chlorine levels:** 2 ppm is acceptable. Levels higher than 4 ppm will hurt the probiotics and is not good for chickens. Normal tap drinking water is well within acceptable levels of chlorine.
- **Mix only what you need-** Only mix up stock for a day or two, as the probiotics expire 5 days after being activated by adding water. Keep both concentrate & mixed water out of sunlight.
- **If disinfectants products must be used–** Use prior to Chrisal application and be sure to flush the water lines and drinkers with clean water BEFORE Chrisal's products are used.



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